

# CDF Run II Preliminary, $1.9\text{fb}^{-1}$

## $t\bar{t}\gamma$ , Isolated Leptons

Standard Model Source	$e\gamma bE_T$	$\mu\gamma bE_T$	$(e + \mu)\gamma bE_T$
$t\bar{t}\gamma$ (semileptonic)	$1.97 \pm 0.36$	$1.47 \pm 0.27$	$3.44 \pm 0.62$
$t\bar{t}\gamma$ (dileptonic)	$0.52 \pm 0.10$	$0.43 \pm 0.08$	$0.95 \pm 0.17$
$W^\pm c\gamma$	$0.0 \pm 0.02$	$0.0 \pm 0.02$	$0 \pm 0.03$
$W^\pm cc\gamma$	$0.0 \pm 0.02$	$0.01 \pm 0.01$	$0.01 \pm 0.02$
$W^\pm bb\gamma$	$0.06 \pm 0.03$	$0.01 \pm 0.01$	$0.07 \pm 0.03$
$WZ$	$0.02 \pm 0.02$	$0.0 \pm 0.02$	$0.02 \pm 0.02$
$\tau \rightarrow \gamma$ fake	$0.08 \pm 0.01$	$0.02 \pm 0.01$	$0.10 \pm 0.01$
Jet faking $\gamma$ ( $e j E_T b, j \rightarrow \gamma$ )	$2.37 \pm 1.22$	$1.42 \pm 0.70$	$3.79 \pm 1.92$
MisTags	$0.78 \pm 0.20$	$0.83 \pm 0.22$	$1.61 \pm 0.31$
QCD(Jets faking $\ell$ and $E_T$ )	$0.53 \pm 0.46$	$0 \pm 1$	$0.53 \pm 1.10$
$ee E_T b, e \rightarrow \gamma$	$0.34 \pm 0.11$	–	$0.34 \pm 0.11$
$\mu e E_T b, e \rightarrow \gamma$	–	$0.20 \pm 0.06$	$0.20 \pm 0.06$
Total SM Prediction	$6.7 \pm 1.4(tot)$	$4.4 \pm 1.3(tot)$	$11.1 \pm 2.3(tot)$
Observed in Data	8	8	16